

Hydrologic Model Manager

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| Short Name | LASCAM |
| Long Name | Large Scale Catchment Model |
| Description | |
| Model Type | Conceptual model |
| Model Objectives | To predict the impact of land use and climate changes on the daily trends of streamflow and water quality (salinity, sediment, nutrients, etc.) in large catchments over long periods. |
| Agency Office | Centre for Water Research, University of Western Australia, Nedlands, Australia |
| Tech Contact | Dr. M. Sivalapan |
| Model Structure | The model is a complex conceptual one, the basic building blocks being subcatchments organized around the river network. All hydrological and water quality processes are modeled at the sub-catchment scale. |
| Interception | |
| Groundwater | |
| Snowmelt | |
| Precipitation | |
| Evapo-transpiration | |
| Infiltration | |
| Model Parameters | 87 parameters |
| Spatial Scale | 100 to 10,000 square meters |
| Temporal Scale | Daily |
| Input Requirements | Topographic, hydrometeorological, rainfall, soils, land use, basin geomorphological, and water quality. |
| Computer Requirements | PC with windows |
| Model Output | Streamflow and water quality |
| Parameter Estimation Model Calibration | Parameters are obtained by fitting an optimization |
| Model Testing Verification | Verified on a number of catchments in Australia and outside |
| Model Sensitivity | Not reported |
| Model Reliability | Not reported but excellent model simulations have been obtained. |
| Model Application | Swan-Avon River basin and Salmon basin in Australia; a tropical catchment in Malaysia |
| Documentation | Not available in public domain but it can be obtained from Dr. Sivalapan |
| Other Comments | <p>The model is comprehensive and produces excellent results.</p> <p>References:</p> <p>Sivalapan, M., Viney, N. R. and Ruprecht, J. K., 1996. Water and salt balance modeling to predict the effects of land use changes in forested catchments: 1. small catchment water balance model. Hydrological Processes, Vol. 10, pp. 393-411.</p> |

Sivapalan, M., Viney, N. R. and Ruprecht, J. K., 1996. Water and salt balance modeling to predict the effects of land use changes in forested catchments:2. Coupled model of water and salt balances. Hydrological processes, Vol. 10, pp. 413-428.

Sivapalan, M., Viney, N. R. and Ruprecht, J. K., 1996. Water and salt balance modeling to predict the effects of land use changes in forested catchments:3. The large catchment model. Hydrological Processes, Vol. 10, pp. 429-446.

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| Developer | |
| Technical Contact | |
| Contact Organization | |